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Attorney Docket No. P19311

In re application of Günther KÖLLE

Serial No. : 09/577,570

Group Art Unit: 1731

Filed : May 25, 2000

Examiner: M. Halpern

For : ROTOR FOR A PAPER STOCK PROCESSING MACHINE, ANTIWEAR ELEMENT FOR SUCH A ROTOR, AND PAPER STOCK PROCESSING APPARATUS

THE COMMISSIONER OF PATENTS AND TRADEMARKS

Washington, D.C. 20231

Sir:

Transmitted herewith is an Appeal Brief Under 37 C.F.R. § 1.192 (in trip.) in the above-captioned application.

- Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a previously filed statement.
- A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
- An Information Disclosure Statement, PTO Form 1449, and references cited.
- No additional fee is required.

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 28	*28	0	x 9=	\$	x 18=	\$0.00
Indep. Claims: 3	**3	0	x 42=	\$	x 84=	\$0.00
Multiple Dependent Claims Presented			+140=	\$	+280=	\$0.00
Appeal Brief fee				\$		\$320.00
			Total:	\$	Total:	\$320.00

\*If less than 20, write 20

\*\*If less than 3, write 3

 Please charge my Deposit Account No. 19-0089 in the amount of \$\_\_\_\_\_. A Check in the amount of \$320.00 to cover the filing fee is included. The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 19-0089. Any additional filing fees required under 37 C.F.R. 1.16. Any patent application processing fees under 37 C.F.R. 1.17, including any required extension of time fees in any concurrent or future reply requiring a petition for extension of time for its timely submission (37 CFR 1.136)(a)(3).

Neil F. Greenblum  
Reg. No. 28,394

AF/1731

P19311.A08



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant : Gunther KÖLLE )  
Appln. No. : 09/577,570 ) Group Art Unit: 1731  
Filed : May 25, 2000 ) Examiner: M. Halpern  
For : ROTOR FOR A PAPER STOCK PROCESSING MACHINE, ANTIWEAR  
ELEMENT FOR SUCH A ROTOR, AND PAPER STOCK PROCESSING  
APPARATUS )

**APPEAL BRIEF UNDER 37 C.F.R. § 1.192**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

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**TC 1700**

This appeal is from the Examiner's final rejection of claims 1 - 28 as set forth in the Final Official Action of February 1, 2002.

A Notice of Appeal in response to the February 1, 2002 Final Office Action was filed June 3, 2002, along with a Request for a One-month Extension of Time. Further, the instant Appeal Brief is being timely submitted by the two-month date after the filing of the Notice of Appeal, i.e., by August 5, 2002 (August 3, 2002 being a Saturday).

The requisite fee under 37 C.F.R. 1.17(c) in the amount of \$ 320.00 for the filing of the Appeal Brief is being paid by check submitted herewith. However, if for any reason the necessary fee is not associated with this file, the Commissioner is authorized to charge the fee for the Appeal Brief and any necessary extension of time fees to Deposit Account No.

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This appeal brief is being submitted in triplicate, pursuant to 37 C.F.R. 1.192(a).

**(1) REAL PARTY IN INTEREST**

The real party in interest is Voith Sulzer Papiertechnik Patent GmbH by an assignment recorded in the U.S. Patent and Trademark Office on May 25, 2000 at Reel 010819 and Frame 0577.

**(2) RELATED APPEALS AND INTERFERENCES**

No related appeals and/or interferences are pending.

**(3) STATUS OF THE CLAIMS**

Claims 1 - 28, the only claims pending in the instant application, stand finally rejected.

**(4) STATUS OF THE AMENDMENTS**

No amendments have been entered subsequent to the Final Office Action of February 1, 2002.

**(5) SUMMARY OF THE INVENTION**

The instant invention is directed to a rotor, which can be located within a tank of a paper stock processing machine, that has at least one rotor blade for creating circulation of the stock suspension contained in the tank, and protection against wear is located on a leading front surface of the rotor blade, as viewed in the rotational direction of the rotor. (Specification page 1, lines 10 - 14). Moreover, the instant invention is directed to an anti-

wear element for protecting a rotor blade of a rotor located arranged in a tank of a paper stock processing machine, in which the rotor blades are adapted to circulate a stock suspension contained in the tank, and to a paper stock processing apparatus including at least the rotor blade for creating circulation of the suspension in the tank. (Specification page 1, lines 15 - 19).

In accordance with an exemplary embodiment of the invention, a rotor blade for stock suspension processing includes an anti-wear element, adapted to protect against wear, having a base body with at least one wear-resistant working surface coupled to the rotor blade. (Specification page 2, line 6 - 8). Moreover, a particular embodiment of the invention is directed to an anti-wear element that includes a base body with at least one wear-resistant working surface and a back side. The anti-wear element is formed to be coupled, e.g., welded, to a leading front edge, as viewed in the rotational direction of the rotor, of the rotor blade to be protected. (Specification page 2, lines 9 - 12). The present invention is also directed to a paper stock processing apparatus that includes a tank, a screen, and a rotor rotatably coupled adjacent the screen. The rotor includes at least one rotor blade having a leading front surface, relative to a rotational direction of the rotor, and an anti-wear element coupled to the leading front edge, that includes a base body and a wear-resistant working surface. (Specification page 5, lines 19 - 24).

The use of rotors for circulating stock suspensions and for breaking up paper stock

contained in such stock suspensions are generally known, and it is also known that such rotors can be positioned alongside a screen to act as screen clearer to remove blockages. Further, wear protection can be applied to leading edges of these rotors (relative to a rotational direction) by welding wear resistant material onto these leading edges. (Specification page 1, lines 21 - 26). However, replacement of worn parts of these rotor is not possible without damaging the blades.

To avoid the above-noted drawback of the prior art, the present invention provides a rotor 1 having a number of rotor blades 3, for example, a total of six blades. Rotor blades 3 are provided with anti-wear elements 5 which are welded onto leading front surfaces 4, as viewed in rotational direction R of rotor 1. Anti-wear element 5 includes of a base body 6 to which wear-resistant working surfaces 7 are attached to a front face. The working surfaces are applied to base body 6 before it is welded to rotor blade 3. In this manner, very good possibilities arise for structuring wear-resistant working surfaces 7 such that they are sufficient for the demands placed on them during the use of the rotor. (Specification page 7, line 10 - page 8, line 1; and Figures 1 and 2).

In the assembly phase, one side of the rotor, i.e., including lower front edge 9, is arranged to face the wall of the tank (or a screen which is to be kept free of blockages) while the opposite side, i.e., including upper front edge 8, is arranged to face the inner volume of the tank. Wear resistant working surface 7 is positioned on lower edge 9 to form an angle

of  $\alpha$  to the vertical (e.g., parallel to a rotational axis of rotor 1). This is very necessary for the clearing effect of rotor 1. In other cases, it may be preferable to arrange wear-resistant working surface 7 vertically, i.e., at an angle  $\alpha$  of  $0^\circ$ , or even at a negative angle. (Specification page 8, lines 1 - 13; and Figure 2).

Rotor 3 finds utility in paper stock processing machines, e.g., pulpers. In particular, rotor 3 can be used in a secondary pulper, which can be particularly demanding with respect to anti-wear properties and to a hydraulic effect of the rotor used, or in a primary pulper, which functions in a generally known manner. (Specification page 9, lines 1- 26; and Figures 6 and 7).

**(6) ISSUES**

**(A) Whether Claims 1 - 28 are Improperly Rejected Under 35 U.S.C. § 103(a) as Unpatentable Over PARASKEVAS (U.S. Patent No. 4,480,760) in view of ZUGELDER (U.S. Patent No. 3,608,976).**

**(7) GROUPING OF CLAIMS**

For the purpose of this appeal, Appellant submits that none of the claims stand or fall together. Therefore, each of claims 1 - 28 are separately patentable for the reasons set forth hereinbelow.

**(8) ARGUMENT**

**(A) The Rejection of Claims 1 - 28 Under 35 U.S.C. § 103(a) Over**

**PARASKEVAS in view of ZUGELDER is in Error, the Rejection Should be  
Reversed, and the Application Should be Remanded to the Examiner.**

The Examiner asserts that PARASKEVAS discloses a pulping apparatus for defibering papermaking stock having a rotor equipped with blades having a leading front surface, that ZUGELDER shows a wear resistant rib extending across the width of blades in a rotor assembly, and that it would have been obvious to modify PARASKEVAS to include a wear resistant rib, as disclosed by ZUGELDER. Appellant traverses the Examiner's assertion.

Appellant's independent claim 1 recites, *inter alia*, at least one rotor blade having a leading front surface to be protected, and an anti-wear element comprising a base body and at least one wear-resistant surface, such that said anti-wear element is coupled to said leading front surface. Appellant's independent claim 15 recites, *inter alia*, a base body with a back side and at least one wear-resistant working surface, such that said back side is formed to correspond to a shape of, and to be coupled to, the leading front edge. Further, Appellant's independent claim 23 recites, *inter alia*, a rotor rotatably coupled adjacent said screen, in which said rotor comprises at least one rotor blade having a leading front surface, relative to a rotational direction of said rotor, and an anti-wear element coupled to said leading front edge, and in which said anti-wear element comprises a base body and a wear-resistant working surface. Appellant submits that no proper combination of the applied documents teaches or suggests at least the above-noted features.

Appellant notes that, while PARASKEVAS is directed to a rotor for a pulping apparatus, this rotor suffers from the same drawbacks noted in the instant application, i.e., they are subject to considerable wear. However, in contrast to the instant invention, PARASKEVAS fails to recognize the problem of blade wear and, therefore, cannot address, through teaching or suggestion, a solution for this problem. As such, this document fails to provide any of the necessary motivation or rationale for modifying PARASKEVAS to reinforce the blade with a wear resistant material.

Further, Appellant notes that PARASKEVAS discloses that blade 23 is removable to enable securing replacement blades to the rotor. Thus, even assuming, *arguendo*, that one ordinarily skilled in the art were to regard this disclosure as a teaching of addressing a problem of blade wear (which Appellant contends is not expressly addressed in PARASKEVAS), Appellant submits that the only suggested solution of PARASKEVAS is to wholly replace worn blades. Thus, Appellant submits that there is no teaching or suggestion of providing the leading front edge of the rotor blade of PARASKEVAS with a specially disclosed anti-wear element. Accordingly, Appellant submits that there is no teaching or suggestion in PARASKEVAS of employing an anti-wear element or a wear-resistant surface, as recited in at least independent claims 1, 15, and 23.

To overcome the above-noted deficiency of PARASKEVAS, the Examiner has applied ZUGELDER, which is directed to a fan blade structured to contact and blow *solid*

particles, such as pulverized coal. However, Appellant notes that the fan blade of ZUGELDER is a propeller arranged to break up large chunks of coal and to propel (throw) the broken up chunks to a downstream collector/processor, and not a rotor for dissolving and screening paper stock, which is disclosed by PARASKEVAS.

Thus, Appellant submits that ZUGELDER's disclosure of a propeller arranged to pulverize coal fails to provide any teaching or suggestion for modifying the rotor of PARASKEVAS, which is intended for use in a pulper. In this regard, Appellant notes that the rotors/blades are intended to process wholly different materials in wholly different manners, and that it would not have been apparent to one ordinarily skilled in the art to even refer to coal pulverizing art in order to modify a pulper rotor. Moreover, as ZUGELDER does not provide any teaching or suggestion of problems which may arise in the pulping apparatus, Appellant submits that it would not have been obvious to one ordinarily skilled in the art to refer to art related to a pulverizing coal fan in order to find motivation or rationale for modifying a pulping rotor.

Further, Appellant submits that it is not apparent why one ordinarily skilled in the art would modify blade 23 of PARASKEVAS in the manner asserted by the Examiner, when the entire blade is designed and intended for simple replacement and securing to the rotor. Appellant notes that, in establishing a *prima facie* case of obviousness under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason *why* one of ordinary skill in the

art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *See Ex parte Clapp*, 227 USPQ 972 (B.P.A.I. 1985) To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellant's disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Notwithstanding the Examiner's statement in the final rejection that the "wear resistant materials capability of Zugelder is an improvement over the wear resistant materials in the present application, and there is no reasons [sic] to state that they would not provide wear protection in water," Appellant contends that this is not a reason *why* one of ordinary skill in the art would have been led to modify the device of PARASKEVAS. Moreover, it is respectfully submitted that the courts have long held that it is impermissible to use Appellant's claimed invention as an instruction manual or "template" to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious. *See In re Fritch*, 972 R.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

Still further, Appellant notes that the Examiner's assertions of obviousness are based, not upon the art of record, but apparently upon Appellant's own disclosure. That is, as noted above, the Examiner states that the "wear resistant materials capability of Zugelder is an improvement over the wear resistant materials in the present application." However, an

improvement over the disclosed invention (although Appellant traverses the Examiner's entire argument in this regard) is not a proper basis for modifying another document. The requisite motivation or rationale for combining the art for record must be shown in the art of record, which the Examiner has failed to do.

Moreover, the Examiner, in discussing the disclosure of ZUGELDER, states that "there is no reasons [sic] to state that [the wear resistant materials] would not provide wear protection in water." However, Appellant submits that the failure of the art to disclose that the wear resistant material of ZUGELDER would not provide wear protection in water is not the same as disclosing that the wear resistant material provides wear protection in water. In this regard, Appellant notes that ZUGELDER fails to disclose or suggest that it would have been obvious to utilize the coal propeller in water, and certainly provides no suggestion that it would have been obvious to utilize reinforcements intended for a pulverizing coal propeller in combination with the pulper rotor of PARASKEVAS.

Accordingly, Appellant submits that the art of record fails to provide the requisite motivation or rationale for combining the applied art in the manner asserted by the Examiner.

Moreover, Appellant submits that, as the leading edges of the rotor blades of PARASKEVAS are shown adjacent screen 16, it is not apparent how one ordinarily skilled in the art would incorporate the ribs of ZUGELDER into the PARASKEVAS apparatus. That is, Appellant submits that the art of record fails to provide any reasons for combining

the documents in the manner asserted by the Examiner. While the Examiner has simply stated that the anti-wear ribs would be attached to the entire leading front surface of the PARASKEVAS blades, the operation of the PARASKEVAS blades and ZUGELDER blades are wholly distinct. As such, Appellant requested that the Examiner more clearly set forth the manner in which it would have been obvious to include ribs on the PARASKEVAS blades, however, no such clarification has yet been provided.

Further, even assuming, *arguendo*, that one were to combine PARASKEVAS and ZUGELDER in the manner asserted by the Examiner (which Appellant submits would not have been obvious), Appellant submits that the combination would not render the instant application unpatentable. In particular, Appellant notes that the ribs of ZUGELDER are intended to break up coal and to protect the blades from contact with the solid particles. Given this disclosure, it would appear that the only modification of PARASKEVAS (albeit not obvious) would be to position the ribs on vane 18 to move the suspension, and not on defibrating insert 23, however, as ZUGELDER fails to provide any such teaching or suggestion, such a modification can only be based upon Appellant's disclosure.

Rejections based on 35 U.S.C. § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner has the initial duty of supplying the factual basis for the rejection and may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption

or hindsight reconstruction to supply deficiencies in the factual basis. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967). As stated in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.

As noted above, it is apparent that the only reason to combine the teachings of the applied references in the manner proposed by the Examiner results from a review of Appellant's disclosure and the application impermissible hindsight. Thus, Appellant submits that the asserted combination fails to teach or suggest the combination of features recited in at least independent claims 1, 15, and 23.

Further still, Appellant notes that none of applied documents teach or suggest utilizing an anti-wear element coupled to a leading front edge that includes a base body and at least one wear-resistant surface. In contrast to the instant invention, PARASKEVAS discloses a replaceable rotor blade without any teaching or suggestion of coupling an anti-wear element to a leading front edge and ZUGELDER teaches of a metal rib for structural support in the breaking up of coal chunks, but does not suggest that the metal rib includes a base body and at least one wear resistant surface, as recited in at least the independent claims. Thus, as neither document teaches or suggests at least the above-noted feature of the independent

claims, Appellant submits that no proper combination of PARASKEVAS and ZUGELDER can even arguably render unpatentable the combination of features recited in at least independent claims 1, 15, and 23.

Moreover, Appellant notes that, while it is not a concern in ZUGELDER, the rotor/screen arrangement in PARASKEVAS is designed so that the rotor movement creates certain current flows to ensure guidance of the suspension toward the screen. However, Appellant submits that it is not apparent from the applied documents whether the addition of ribs of ZUGELDER to the PARASKEVAS rotor would enable the desired creation of currents to be maintained, as the flow over the rotors will likely be interrupted by the ribs.

Accordingly, Appellant submits that no proper combination of the applied documents renders unpatentable the combination of features recited in at least independent claims 1, 15, and 23. Moreover, Appellant submits that the art of record fails to provide the requisite motivation or rationale for combining the documents in the manner asserted by the Examiner. Thus, Appellant submits that the instant rejection is improper and should be withdrawn.

Further still, Appellant submits that even if it is considered that the prior art documents have been properly combined, which Appellant submits they have not, the applied documents fail to disclose or suggest the various recited features of the rotor, anti-wear element, and/or stock suspension processing apparatus recited in at least claims 2 - 14, 16 - 22, and 24 - 28. Thus, Appellant submits that claims 2 - 14, 16 - 22, and 24 - 28 are

allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. Appellant further submits that claims 2 - 14, 16 - 22, and 24 - 28 are separately patentable over any proper combination of PARASKEVAS in view of ZUGELDER. In particular, Appellant submits that no proper combination of PARASKEVAS and ZUGELDER teaches or suggests, *inter alia*, said anti-wear element is welded to said leading front surface, as recited in claim 2; in combination with a tank of a paper stock processing machine, wherein said rotor is rotatably mounted within said tank to circulate a stock suspension in said tank, as recited in claim 3; said paper stock processing machine is a primary pulper having a horizontally oriented screen, and said rotor is rotatably mounted so that said leading front surface positioned adjacent said screen, as recited in claim 4; said paper stock processing machine is a secondary pulper having a vertically oriented screen, and said rotor is rotatably mounted so that said leading front surface positioned adjacent said screen, as recited in claim 5; said at least one wear-resistant working surface comprises a layer of wear-resistant material that is firmly coupled to said base, as recited in claim 6; said at least one wear-resistant material is fixed onto said base body by hard facing, as recited in claim 7; said anti-wear element is formed separately from said rotor, and said anti-wear element is welded to said at least one rotor blade, as recited in claim 8; said at least one rotor blade comprises a plurality of rotor blade having leading front surfaces, and at least one partial section of each

said leading front surface of each rotor blade, radially inwardly from a free end, is completely covered by said anti-wear element, as recited in claim 9; a portion of said anti-wear element coupled to said at least one rotor blade protrudes past said leading front surface, as recited in claim 10; said portion extends past said leading front surface in a direction adapted to face a screen in a paper stock processing machine, as recited in claim 11; a face of said anti-wear element is beveled at an angle  $\alpha$  of between approximately  $1^\circ$  and  $45^\circ$  from parallel to a rotational axis of said rotor, as recited in claim 12; said face of said anti-wear element is beveled such that a radial distance of a surface of said face from said rotational axis increases in a direction toward said leading front surface, as recited in claim 13; said leading front surface has one of a cylindrical and conical ring segment shape, as recited in claim 14; said back side is welded to said leading front edge, as recited in claim 16; in combination with a tank of a paper stock processing machine, wherein the rotor blades are adapted to circulate a stock suspension contained in said tank, as recited in claim 17; said wear-resistant working surface comprises a wear-resistant material, as recited in claim 18; said wear-resistant material comprises a non-rusting, alloyed high-grade steel, as recited in claim 19; said base body has one of a cylindrical and conical ring segment shape, as recited in claim 20; said wear-resistant working surface is welded to said base body and said wear-resistant surface is arranged to form at least one front edge that extends over an edge of said base body opposite said back side, as recited in claim 21; a curvature radius of said front edge is a

maximum of approximately 2 mm, as recited in claim 22; said base body is welded to said leading front surface, and said wear-resistant working surface is coupled to said base body, as recited in claim 24; a portion of said anti-wear element is arranged to protrude past said leading front surface, as recited in claim 25; said portion extends past said leading front surface in a direction adapted to face said screen, as recited in claim 26; said tank is a primary pulper tank, as recited in claim 27; said tank is a secondary pulper tank, as recited in claim 28.

Accordingly, Appellant requests that the Board reverse the Examiner's decision to finally reject claims 1 - 28 under 35 U.S.C. § 103(a) and that the application be remanded to the Examiner for withdrawal of the rejection over PARASKEVAS in view of ZUGELDER and an early allowance of all claims on appeal.

**(B) Conclusion**

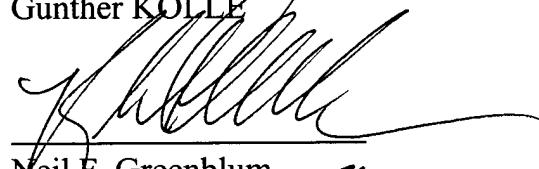
Claims 1 - 28 are patentable under 35 U.S.C. § 103(a) over PARASKEVAS in view of ZUGELDER. Specifically, the applied art of record fails to teach or suggest the unique combination of features recited in Appellant's claims 1 - 28. Accordingly, Appellant respectfully requests that the Board reverse the outstanding rejection of the claims 1 - 28 under 35 U.S.C. § 103(a) and remand the application to the Examiner for withdrawal of the rejection.

Thus, Appellant respectfully submits that each and every pending claim of the present

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application meets the requirements for patentability under 35 U.S.C. § 103(a), and that the present application and each pending claim are allowable over the prior art of record.

Respectfully submitted,  
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August 5, 2002

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Attachments: Appendix : Claims on Appeal

**APPENDIX A**

***CLAIMS ON APPEAL***

1. A rotor for a paper stock processing machine comprising:  
at least one rotor blade having a leading front surface to be protected;  
an anti-wear element comprising a base body and at least one wear-resistant surface,  
said anti-wear element is coupled to said leading front surface.
2. The rotor in accordance with claim 1, wherein said anti-wear element is welded  
to said leading front surface.
3. The rotor in accordance with claim 1 in combination with a tank of a paper  
stock processing machine, wherein said rotor is rotatably mounted within said tank to  
circulate a stock suspension in said tank.
4. The rotor in accordance with claim 3, wherein said paper stock processing  
machine is a primary pulper having a horizontally oriented screen, and said rotor is rotatably  
mounted so that said leading front surface positioned adjacent said screen.
5. The rotor in accordance with claim 3, wherein said paper stock processing  
machine is a secondary pulper having a vertically oriented screen, and said rotor is rotatably  
mounted so that said leading front surface positioned adjacent said screen.
6. The rotor in accordance with claim 1, wherein said at least one wear-resistant  
working surface comprises a layer of wear-resistant material that is firmly coupled to said  
base.

7. The rotor in accordance with claim 6, wherein said at least one wear-resistant material is fixed onto said base body by hard facing.

8. The rotor in accordance with claim 6, wherein said anti-wear element is formed separately from said rotor, and said anti-wear element is welded to said at least one rotor blade.

9. The rotor in accordance with claim 1, wherein said at least one rotor blade comprises a plurality of rotor blade having leading front surfaces, and at least one partial section of each said leading front surface of each rotor blade, radially inwardly from a free end, is completely covered by said anti-wear element.

10. The rotor in accordance with claim 1, wherein a portion of said anti-wear element coupled to said at least one rotor blade protrudes past said leading front surface.

11. The rotor in accordance with claim 10, wherein said portion extends past said leading front surface in a direction adapted to face a screen in a paper stock processing machine.

12. The rotor in accordance with claim 1, wherein a face of said anti-wear element is beveled at an angle  $\alpha$  of between approximately  $1^\circ$  and  $45^\circ$  from parallel to a rotational axis of said rotor.

13. The rotor in accordance with claim 12, wherein said face of said anti-wear element is beveled such that a radial distance of a surface of said face from said rotational

axis increases in a direction toward said leading front surface.

14. The rotor in accordance with claim 1, wherein said leading front surface has one of a cylindrical and conical ring segment shape.

15. An anti-wear element for protecting a leading front surface of a rotor blade, comprising:

a base body with a back side; and

at least one wear-resistant working surface,

wherein said back side is formed to correspond to a shape of, and to be coupled to, the leading front edge.

16. The anti-wear element in accordance with claim 15, wherein said back side is welded to said leading front edge.

17. The anti-wear element in accordance with claim 15, in combination with a tank of a paper stock processing machine, wherein the rotor blades are adapted to circulate a stock suspension contained in said tank.

18. The anti-wear element in accordance with claim 15, wherein said wear-resistant working surface comprises a wear-resistant material.

19. The anti-wear element in accordance with claim 18, wherein said wear-resistant material comprises a non-rusting, alloyed high-grade steel.

20. The anti-wear element in accordance with claim 15, wherein said base body

has one of a cylindrical and conical ring segment shape.

21. The anti-wear element in accordance with claim 15, wherein said wear-resistant working surface is welded to said base body and said wear-resistant surface is arranged to form at least one front edge that extends over an edge of said base body opposite said back side.

22. The anti-wear element in accordance with claim 21, wherein a curvature radius of said front edge is a maximum of approximately 2 mm.

23. A paper stock processing apparatus comprising:

a tank;

a screen;

a rotor rotatably coupled adjacent said screen;

said rotor comprising at least one rotor blade having a leading front surface, relative to a rotational direction of said rotor, and an anti-wear element coupled to said leading front edge;

said anti-wear element comprising a base body and a wear-resistant working surface.

24. The apparatus in accordance with claim 23, wherein said base body is welded to said leading front surface, and said wear-resistant working surface is coupled to said base body.

25. The apparatus in accordance with claim 23, wherein a portion of said anti-wear

element is arranged to protrude past said leading front surface.

26. The apparatus in accordance with claim 25, wherein said portion extends past said leading front surface in a direction adapted to face said screen.

27. The apparatus in accordance with claim 23, wherein said tank is a primary pulper tank.

28. The apparatus in accordance with claim 23, wherein said tank is a secondary pulper tank.